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Mr. Thomas Alcamo
U.S. EPA, Region V
Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604

Dear Tom,

CBS has conducted sampling at the Detmer Spring associated with the ABB Bloomington Plant Site since July 2008. Quarterly sampling has been conducted since March 2011 in accordance with the Long Term Groundwater Monitoring Plan, dated April 2012, for the site. The plan dictates that at least eight quarters of sampling be conducted and then the data evaluated to determine the future of the program. In late 2016, after twenty-six quarters, continued sampling was suspended pending an evaluation of all results. In our meeting concerning the Bloomington sites in July 2018, we discussed the need for continued sampling at the Detmer Spring location. At the end of our discussion, you asked that CBS provide a letter to USEPA presenting our position on the need for additional sampling.

As you know, Detmer Spring is the outlet for a karst groundwater basin near the former Westinghouse and ABB Plant on Curry Pike in Bloomington (the site). The spring did appear to be impacted by both PCBs and VOCs some of which may have originated at the site. CBS performed a number of remedial actions at the site over the years culminating in a final action in 2009. As a result of these actions, the water quality at Detmer Spring has significantly improved. It is our position that the remaining contaminants of concern at the spring show stable or decreasing trends and are not at levels that should require any additional sampling. The bases for our position are the following:

- CBS has established a significant data set for the spring water since the completion of the remedial work in accordance with the approved sampling plan.
- PCBs were the primary contaminant of concern at the site. PCBs have declined to non-detect levels at the spring since the completion of the remedial actions.
- Several chlorinated solvents have also been above detection limits at the spring. While some of these were also present at the site, there may be other sources other than the site for these solvents at the spring.

- The chlorinated solvent levels in the spring water have decreased over time and currently display stable or decreasing trends.
- The chlorinated solvents are, and always have been, below the applicable state surface water quality standards at the spring emergence.

Table 1 shows the historical data for the contaminants of concern (PCBs and several chlorinated solvents) taken per the sampling plan. Figures 1 through 5 display the data as simple time series. There is an obvious downward or stable trend indicated in the data for all COCs after the completion of the remedial actions at the site. The data have also been analyzed by both CBS and USEPA using the Mann-Kendall Test and both parties have confirmed a stable or decreasing trend for all COCs.

The Detmer Spring waters enter the West Branch of Stout's Creek. This creek is a very small stream. The waters of this stream are not used for human drinking water purposes and, as such, there is no public water intake. The State of Indiana has promulgated surface water quality standards for all waters of the state (see 327 IAC 2). The applicable standards for this stream should be either those based on protection of ecological resources or the human health criteria assuming some level of consumption of organisms from the stream.

The applicable state surface water standards based on ecological resources for the remaining detectable solvent COCs at the spring are not listed on the table published by the State. In such a case, the ecologically based standard can be calculated by the commissioner based on techniques provided in the State regulations. CBS is not aware of any such standard being calculated by the commissioner for the chlorinated solvents present at the spring. USEPA has previously used the USEPA Region V ECO screening standards for comparisons (see email from Tom Alcamo to Dottie Alke dated January 26, 2018). All the chlorinated solvents detected at the spring are below the Region V ECO screening values. It is not known if the PCBs are below the ECO screening values because the PCBs ECO screening value is less than the detection limit. Note that the PCB levels at the spring in all samples taken per the plan are below the 0.3 ppb standard historically applied to the Bloomington Site treatment plant discharges.

In our July meeting, USEPA stated that the current levels of two of the detected chlorinated solvents (TCE and PCE) at the spring were above national USEPA human health criteria. However, as Indiana's Water Quality Standards have been approved by USEPA, the appropriate human health criteria are those promulgated by the State found in 327 IAC 2. The applicable human health standards from the State are found to be 88.5 ppb for PCE and 807 ppb for TCE (see Table 6-1 of 327 IAC 2). All sample results for TCE and PCE are well below these standards.

Additionally, as discussed in our meeting, the Detmer Spring assuredly receives groundwater from many other sites in the immediate area. That area can be characterized as commercial and industrial with several other major industrial concerns historically or currently active. There is reason to believe that some of these other industrial concerns have used the very common chlorinated solvents that still appear at Detmer Spring. CBS has noted that there are chlorinated solvents on the southwest portion of the site that appear to originate from an offsite source based on groundwater flow directions.

In summary, CBS feels that additional data at the Detmer Spring is not warranted because the levels of COCs presently at the spring are currently below water quality standards with stable or decreasing trends.

If you have any questions about this issue. Please do not hesitate to contact me.



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Attachments

cc: Jessica Fliss, IDEM
James Hall, CBU
Simeon Baker, MCHD
Donnell Jackson, ABB

Table 1: Detmer Spring Recent Data

Sample Date	Quarter	PCB	1,1-DCE	PCE	TCE	cis-DCE
7/15/2008	2008-Q2	0.12	14.5	20	18	8.35
12/3/2008	2008-Q4	0.23	8.2	16	16.5	8.45
6/24/2009	2009-Q2	0.23	11	12	13	4.1
8/13/2009	2009-Q3	0.195	11	25.5	26	11
11/20/2009	2009-Q4	0.15	6.7	13	11	6.6
1/28/2010	2010-Q1	0.135	2.5	7.15	6.85	2.5
3/28/2011	2011-Q1	0.085	5.35	13	9.95	2.5
6/30/2011	2011-Q2	0.115	2.5	11	8.7	2.5
9/22/2011	2011-Q3	0.11	2.5	9.4	7.9	2.5
12/13/2011	2011-Q4	0.105	2.5	9.55	9.65	2.5
3/21/2012	2012-Q1	0.075	2.5	10.3	11.5	2.5
6/20/2012	2012-Q2	0.09	2.5	8.5	9.95	5.85
9/20/2012	2012-Q3	0.05	2.5	11	8.85	2.5
12/19/2012	2012-Q4	0.05	2.5	10	9.3	2.5
5/29/2013	2013-Q2	0.125	2.5	12	12	2.5
9/4/2013	2013-Q3	0.05	2.5	13	12	5.4
12/4/2013	2013-Q4	0.05	5.5	12.5	15.5	5.65
3/18/2014	2014-Q1	0.05	4.35	13	12	4.2
6/9/2014	2014-Q2	0.075	4.95	12	12	4.05
9/22/2014	2014-Q3	0.11	3.9	9.4	10	3.85
12/15/2014	2014-Q4	0.065	2.15	8.15	10.9	3.35
3/19/2015	2015-Q1	0.05	3.65	8	11.85	2.7
6/24/2015	2015-Q2	0.05	2.25	4.1	5.2	1.55
9/17/2015	2015-Q3	0.19	2.55	10.25	11.15	5.75
12/9/2015	2015-Q4	0.05	2.25	10.35	10.5	4.05
3/22/2016	2016-Q1	0.05	2.2	10.7	11.6	3.0
6/29/2016	2016-Q2	0.05	2.1	9.0	10.0	4.2
9/20/2016	2016-Q3	0.05	0.5	8.6	9.6	2.9

Note: Only those analytes that were detected above the nominal reporting limit in 2015 and 2016 are included in this table. For full analyte results, refer to the individual quarterly reports

Figure 1: Detmer Spring PCB Sample Results

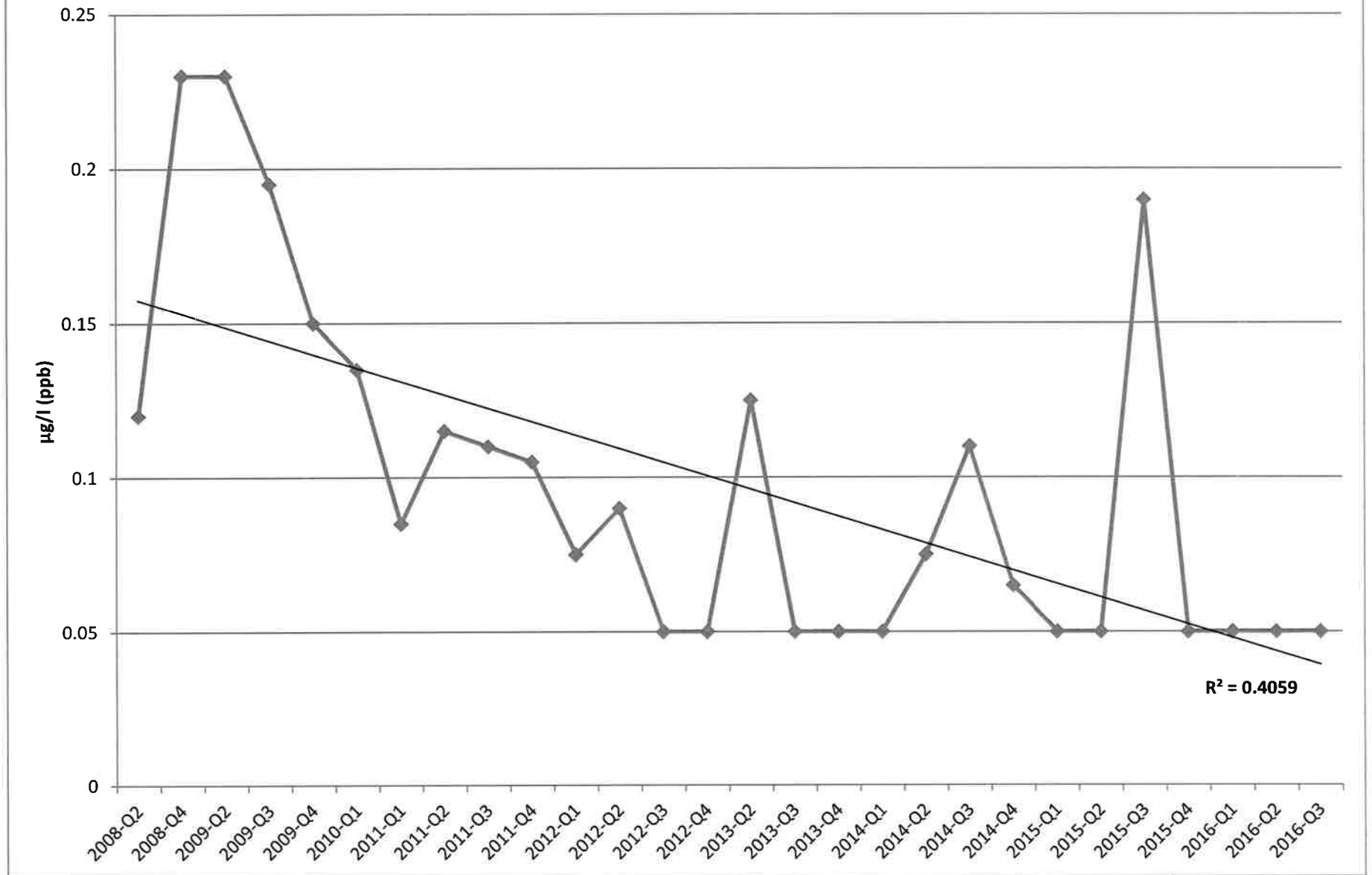


Figure 2: Detmer Spring TCE Results

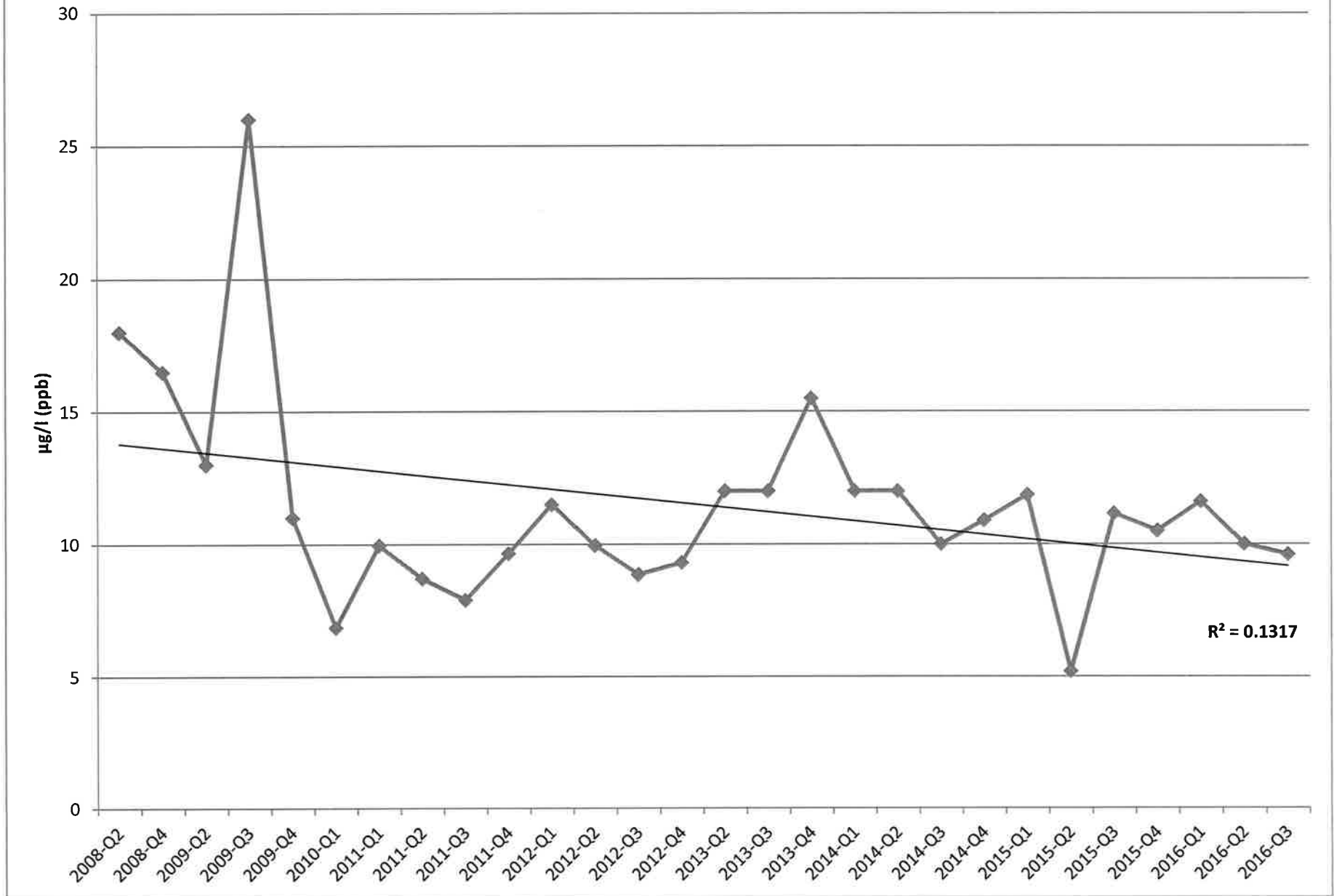


Figure 3: Detmer Spring Cis-DCE Results

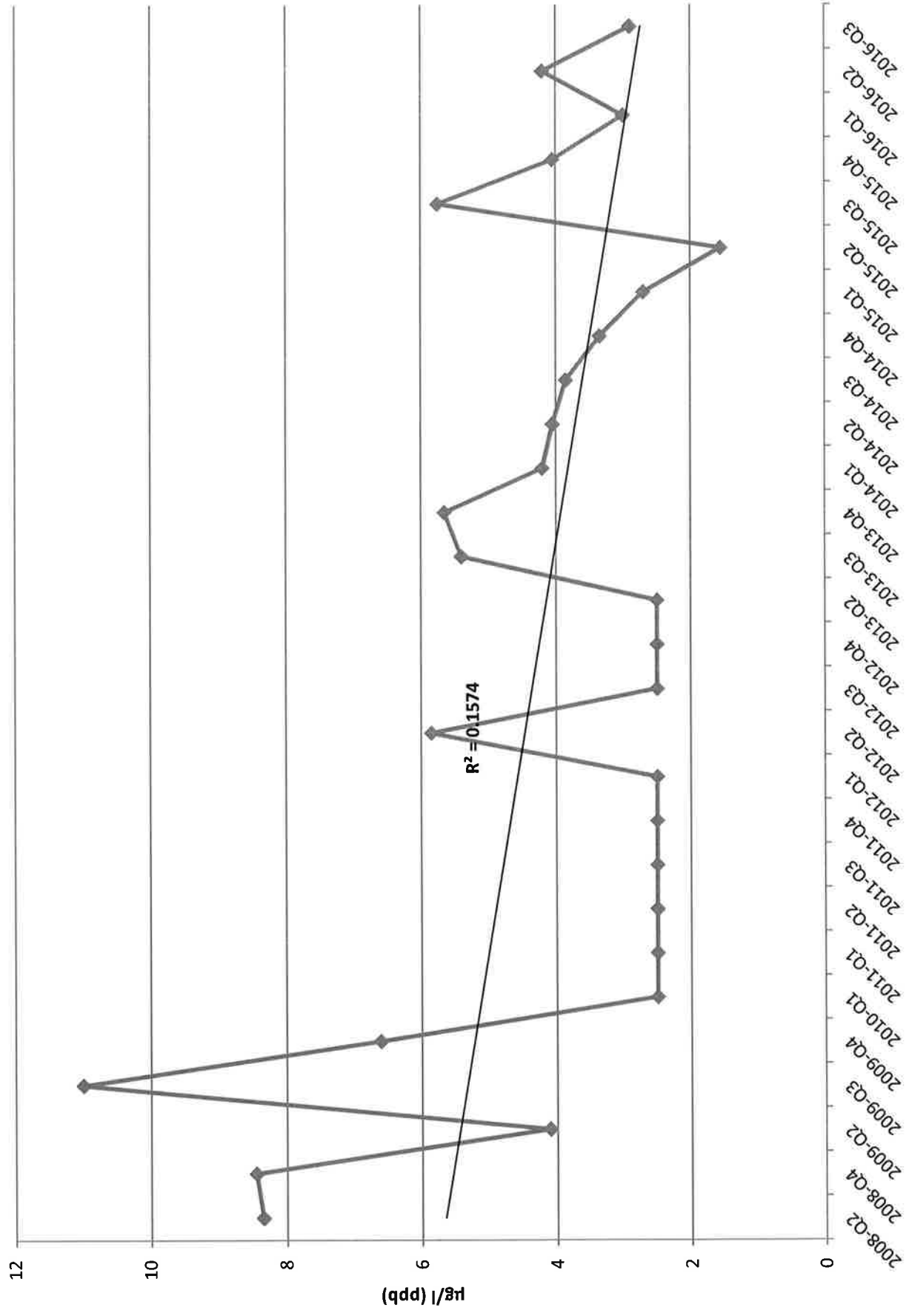


Figure 4: Detmer Spring PCE Results

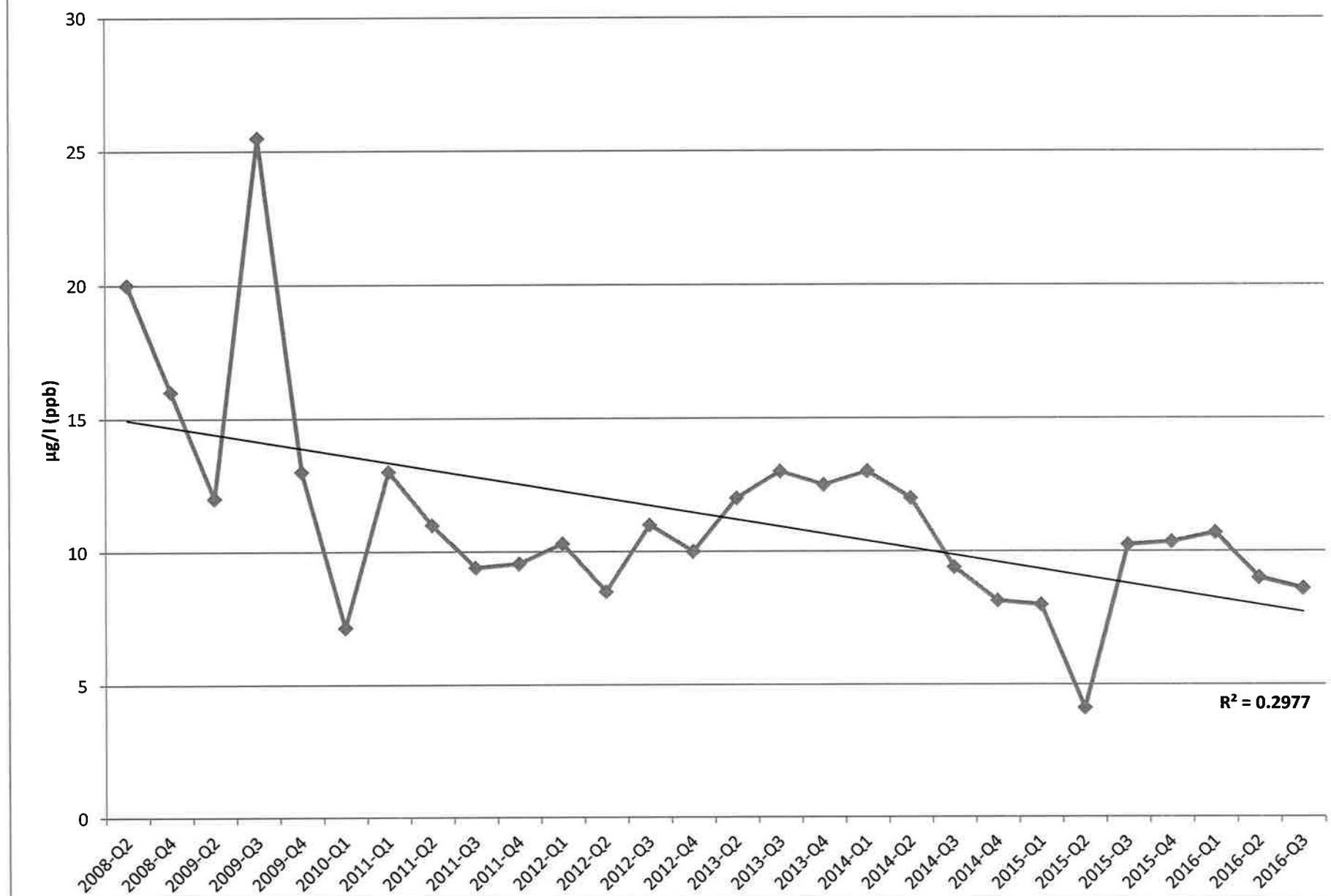


Figure 5: Detmer Spring 1,1-DCE Results

